Unslanted punctuation in Computer modern italic *

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Abstract

The Computer Modern text italic fonts have been modified it the following manner:

- all punctuation chars turns unslanted,
- corresponded italic corrections added as kerning;

Replacement of cmti* fonts fy cmtiup* simplifies typesetting of articles: otherwise author or editor have to use additional tex commands in italic text with formulas.

Contents

Preface

There exist the well-known problem with scientific articles typesetting in TEX: the unslanted punctuation in mathematical formulas looks in a terrible dissonance with the slanted punctuation in a paragraf with italic text font such as theorem formulation.

The $\mathcal{AMS}$-TEX and $\mathcal{AMS}$-LATEX macro packages provides and user guides recommends uprighting the slanted punctuation by usage appropriate macro (`\rom{}`) which makes its argument unslanted and adds the italic correction before it. This approach does not give the perfect solution:

- this specific to slanted text markup is not style independent;
- this markup requires extra work;
- it is so easy to miss some comma or semicolon slanted especially while copying sentences from other text.

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The special italic font with unslanted punctuation seems to provide the better problem solution then special text markup.

In order to keep a backward compatibility, the new font have to differ from standard computern modern italic just in the two aspects:

1. all the punctuation chars must be unslanted;
2. There must be another kerning between each letter and punctuation to include italic correction.

The principal question was how to provide necessary portability between those different kinds of TeX systems: We need exactly identical metric files for slightly different fonts: glyphs (pictures) for punctuation chars in METAFONT generated and virtual fonts differs a bit even when we use `romand.mf` source for digits.

The solution accepted was the more or less invisible width corrections inserted with appropriate `moveright`/`moveleft` commands in `cmtiup*.vf` by perl script.

The package contains the proposed solution support for CM italic, METAFONT sources (possibly minimal modification of `cmti*.mf` sources) for systems without virtual font support, virtual fonts (combining text from `cmti*` and punctuation from `cmr*`) to use with type1 CM fonts and package for LaTeX 2_ε users.

1 Distribution and installation

1.1 Files to distribute

The full `cmtiup` distribution on CTAN contains following files:

- Full `cmtiup.zip` archive (***56***.*11k*) has been packed for use in any tds-compliant distribution;
- Source `cmtiupsr.zip` archive (***26***.*51k*) contains just the cmtiup.dtx file with all sources necessary to produce full files set;
- EmTeX runtime `cmtiupem.zip` archive (***24***.*98k*) packed for use with emTeX and does not include sources and virtual fonts.

`cmtiup.txt`

- (***1***.*16k*) contains brief plain text annotation;

`cmtiup.pdf`

- (***154***.*81k*) contains short user documentation in PDF format;

`cmtiup.tpm`

- (***1***.*95k*) serves the fpTeX installation routine.

Any of archive files can be distributed along.

1.2 Installation on tds-compliant system

The `cmtiup.zip` archive contains the following files:

`texmf/doc/fonts/misc/cmtiup.dvi (`*10.30k*`)`
— Base documentation in dvi format

`texmf/doc/fonts/misc/cmtiup.txt (`*1.16k*`)` — Ascii brief description

texmf/fonts/source/rfbr/cm/cmtiup/cmtiup10.mf (1.08k)
— METAFONT 10pt source driver file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiup12.mf (1.08k)
— METAFONT 12pt source driver file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiup7.mf (1.08k)
— METAFONT 7pt source driver file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiup8.mf (1.08k)
— METAFONT 8pt source driver file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiup9.mf (1.08k)
— METAFONT 9pt source driver file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiupgn.mf (5.44k)
— METAFONT source generator file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiuplg.mf (10.28k)
— Shortened itallig.mf CM source file
texmf/fonts/source/rfbr/cm/cmtiup/cmtiupp.mf (5.53k)
— Switched slant in itallig.mf CM source file
texmf/fonts/vf/rfbr/cm/cmtiup/cmtiup10.vf (1.11k) — Virtual font 10pt file
texmf/fonts/vf/rfbr/cm/cmtiup/cmtiup12.vf (1.11k) — Virtual font 12pt file
texmf/fonts/vf/rfbr/cm/cmtiup/cmtiup7.vf (1.11k) — Virtual font 7pt file
texmf/fonts/vf/rfbr/cm/cmtiup/cmtiup8.vf (1.11k) — Virtual font 8pt file
texmf/fonts/vf/rfbr/cm/cmtiup/cmtiup9.vf (1.11k) — Virtual font 9pt file
texmf/source/fonts/misc/cmtiup.dtx (249.55k) — Full sources LaTeX archive
texmf/tex/latex/fonts/misc/cmtiup.sty (1.33k)
— LaTeX package to replace CM italic
texmf/tpm/cmtiup.tpm (1.95k) — TPM sample file

The archive is ready to use in fpTeX. To install package in any tds-compliant system, it is sufficient to unpack this archive with full path on texmf directory. The package is ready to run with TeX after filename database ls-lR will be updated.

1.3 EmTeX installation

The listed above *.sty, *.mf, *.sty, *.tfm files are in appropriate directories in cmtiupem.zip archive. All are ready to run just after unpacking.

1.4 Pdftex, dvips and dvipdf usage remark

As soon as *.vf and *.tmf files are in searchpath, no extra *.map nor *.cfg files are needed to configure: driver should use the Computer modern fonts in type1 or other format whatever is available in your system.

1.5 Unslanted punctuation in LaTeX2e

The easy way to use unslanted punctuation is just replace all the standard Computer modern text italic font in Your document by cmtiup* fonts. You can do it by printing a line

```
\usepackage{cmtiup}
```

somewhere in the preamble of Your document.